REMARKS

In response to the Office Action mailed July 20, 2010, Applicants respectfully request reconsideration. Claims 1, 3-5, 7-13 and 16 were previously pending for examination. Claims 1 and 5 are herein amended. No claims have been canceled or added. As a result, claims 1, 3-5, 7-13 and 16 are currently pending, with claims 1 and 5 being independent. No new matter has been added.

Claim Objections

The Office Action objects to claims 1 and 5 due to informalities. Applicants have amended the claims to address these issues. The claims were amended to recite, "wherein the foam further comprises ~~in which foam~~ at least one crust-forming fire-retardant material and a pH neutralized graphite material ~~are incorporated~~..." These claim limitations are supported throughout the original application including, for example, original claims 1 and 5. In light of the above, Applicants respectfully request that the respective objections of claims 1 and 5 be withdrawn.

Rejections Under 35 U.S.C. §103

I. Claim 1

The Office Action rejects claim 1 as purportedly being obvious in view of Wallace (US Pat. No. 5,719,199).

Without acceding to the propriety of the rejection of claim 1, Applicants have herein amended claim 1 to recite, "wherein the crust-forming fire-retardant material is present in such a high amount that a fire-retardant crust is formed on a side of the foam when directly exposed to high temperatures due to the presence of a fire, wherein the fire-retardant crust provides a shield against the effect of the fire." These limitations are supported throughout the specification, for example, including paragraphs [0019], [0025], [0063], and [0067].

The Office Action states that Wallace teaches that a phosphorous or melamine containing compound can be added to the foam as an additional fire retardant ingredient. The Office Action also states that these additional compounds would aid in the formation of a crust when subject to a fire. Applicants respectfully disagree with the basic premise of including crust-forming materials in Wallace.

Wallace teaches a flexible closed cell polymeric foam incorporating at least one blowing agent and expandable graphite, see abstract. Wallace also teaches that additional fire retardant compounds, including phosphorous or melamine containing compounds, may be incorporated into the foam, see col. 3 lines 21-30. Furthermore, Wallace states that the disclosed foam is primarily suitable for buoyant seats for aircraft, but may also be used in boats, oil rigs, the packaging industry, ground transportation seating, and wall insulation and packing (such as in an aircraft internal cabin wall packing), see col. 5 lines 55-61. Wallace incorporates a reference to U.S. Patent No. 3,574,644 by Olstowski, see col. 3 lines 12-15 of Wallace. Olstowski merely teaches the use of expandable graphite subjected to a basic treatment for incorporation with different materials, see col. 2 lines 26-42 and lines 55-64.

Applicants respectfully submit that neither Wallace (nor Olstowski) explicitly or inherently teach, "wherein the crust-forming fire-retardant material is present in such a high amount that a fire-retardant crust is formed on a side of the foam when directly exposed to high temperatures due to the presence of a fire, wherein the fire-retardant crust provides a shield against the effect of the fire." Further, there would have been no apparent reason to use a crust forming foam for the applications stated in Wallace. The stated applications in Wallace are for materials that would likely be exposed to heat across the entire surface area of the foam. In none of these applications does there appear to be a need for a shield, such as a crust, that would shield a fire. Consequently, one would not have had a reason based on the teachings of Wallace to incorporate phosphorous or melamine containing compounds in such a high amount that the foam would form a fire retardant crust when exposed to fire. Furthermore, Wallace and the Office Action both appear to merely reference Olstowski with regards to the use of expandable graphite, not the formation of a crust.

Applicants also submit that Wallace merely teaches the use of just enough fire-retardant material to create a foam appropriate for a floatation device, not enough for crust formation. Wallace specifically notes that an inflexible closed cell foam easily fractures under compression resulting in a non-buoyant material, see Wallace col. 2 lines 4-16. As stated above, the material of Wallace is intended as a flotation device. Therefore, the material of Wallace needs to remain buoyant and thus must remain flexible prior to and after exposure to fire. It follows that one of skill in the art would actively design/select a material to avoid crust formation when exposed to fire so as to retain the materials flexibility and necessary buoyancy. Consequently, there would be no apparent reason, in view of Wallace, to include a crust-forming fire-retardant material in such an amount that a fire-retardant crust could be formed since the formation of a fire-retardant crust would negatively impact the material properties required for the foams intended purpose as a floatation device.

Therefore, neither Wallace nor Olstowski separately or in combination disclose explicitly or inherently, "the crust-forming fire-retardant material is present in such a high amount that a fire-retardant crust is formed on a side of the foam when directly exposed to high temperatures due to the presence of a fire, wherein the fire-retardant crust provides a shield against the effect of the fire," and there would have been no apparent reason to modify Wallace to include those materials in such a high amount so as to produce a crust forming fire shield. For at least this reason, claim 1 is patentably distinct.

In light of the above, Applicants respectfully request that the rejection of claim 1 be withdrawn.

II. Claim 5

The Office Action rejects claim 5 as purportedly being unpatentable over by Wallace in view of Cordts (US 2004/0093814).

Without acceding to the propriety of the rejection of claim 5, Applicants have herein amended claim 1 to recite, "wherein the crust-forming fire-retardant material is present in such a high amount that a fire-retardant crust is formed on a side of the foam when directly exposed to high temperatures due to the presence of a fire, wherein the fire-retardant crust provides a shield against the effect of the fire." These limitations are supported throughout the specification, for example, including paragraphs [0019], [0025], [0063], and [0067].

The Office Action states that it would have been obvious to include the fire stopping material of Wallace as the fire stopping material used in Cordts. Applicants respectfully disagree with the basic premise of including crust-forming materials in Wallace.

Cordts teaches a fire stopping apparatus for a through-penetration in a wall, floor, or the like, see paragraph [0007]. The apparatus includes a plurality of slats that may be arranged to cover the through-penetration top opening while accommodating a bundle passed through the through-penetration, see Fig. 1. The apparatus further includes a fire stop material arranged in the through-penetration to provide a fire stopping barrier, see paragraph [0029].

Applicants respectfully submit that while Cordts does discuss fire stop materials, Cordts does not disclose explicitly or inherently the inclusion of at least one crust-forming fire-retardant material as recited by the claim. Furthermore, as detailed above with respect to claim 1, Wallace does not explicitly or inherently disclose the claim limitation, "wherein the crust-forming fire-retardant material is present in such a high amount that a fire-retardant crust is formed on a side of the foam when directly exposed to high temperatures due to the presence of a fire, wherein the fire-retardant crust provides a shield against the effect of the fire."

As previously discussed for claim 1, there would have been no apparent reason to use a crust forming foam for the applications stated in Wallace. The stated applications in Wallace are for materials that would likely be exposed to heat across the entire surface area of the foam. In none of these applications does there appear to be a need for a shield, such as a crust, that would shield a fire. Consequently, one would not have had a reason based on the teachings of Wallace to

incorporate phosphorous or melamine containing compounds in such a high amount that the foam would form a fire retardant crust when exposed to fire. Furthermore, as discussed above with respect to claim 1, there would have been no apparent reason to modify the material of Wallace to include a crust-forming shield, as Wallace desires to maintain the flexibility and buoyancy of the material for its intended purpose as a floatation device.

In view of the above, neither Wallace, Cordts, nor the combination of the two explicitly or inherently disclose, "wherein the crust-forming fire-retardant material is present in such a high amount that a fire-retardant crust is formed on a side of the foam when directly exposed to high temperatures due to the presence of a fire, wherein the fire-retardant crust provides a shield against the effect of the fire," and there would have been no apparent reason to modify Wallace in view of Cordts to include those materials in such a high amount so as to produce a crust forming fire shield. For at least this reason, claim 5 is patentably distinct.

In light of the above, Applicants respectfully request that the current rejection of Claim 5 be withdrawn.

III. Dependent Claims

Dependent claims 3-4 depend from independent claim 1 and are allowable for at least the same reasons.

Dependent claims 7-13 and 16 depend from independent claim 5 and are allowable for at least the same reasons.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance to discuss any outstanding issues relating to the allowability of this application.

If the response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. Applicants believe no fee is due with this response. However, if a fee is due, please charge Deposit Account No. 23/2825 under Docket No. B1215.70009US00 from which the undersigned is authorized to draw.

Dated: October 19, 2010

Respectfully submitted,

By _____

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